

***LIFE CYCLE ASSESSMENT (LCA) PRODUK SERBUK MINUMAN
COKELAT CHOCOMIX DI INDUSTRI GRIYA COKELAT
NGLANGGERAN, KAPANEWON PATUK, KABUPATEN GUNUNG KIDUL***

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ABSTRAK

Industri selain memiliki manfaat yang positif juga memiliki potensi dampak negatif bagi lingkungan. Dewasa ini kepedulian masyarakat global terhadap kelestarian lingkungan meningkat, termasuk terhadap produk yang ramah lingkungan dikalangan masyarakat seiring dengan digalakkannya *Sustainable Development Goals* (SDGs) yang mengintegrasikan tiga aspek pembangunan yaitu pertumbuhan ekonomi, kesejahteraan social, dan kelestarian lingkungan yang bertujuan untuk kesejahteraan manusia secara global. Hal tersebut mendorong industri untuk melakukan analisis terhadap dampak lingkungan dari produk yang dihasilkan agar tetap dapat bersaing di pasar global.

Metode penelitian yang digunakan adalah metode *Life Cycle Assessment* (LCA) atau penilaian siklus hidup produk chocomix dengan ruang lingkup *cradle to gate* yaitu mulai dari proses budidaya, ekstraksi bahan baku, sampai pada akhir proses produksi menjadi produk chocomix dengan melakukan beberapa tahap yakni *goal and scope*, *live cycle inventory* (LCI), *live cycle impact assessment* (LCIA) menggunakan ReCiPe 2016 *midpoint* (H), dan *interpretation*.

Hasil dari penelitian ini menunjukkan bahwa nilai GWP (*Global Warming Potential*) per 1 kg produk chocomix sebesar 153,8 kg CO₂ eq, nilai AP (*Acidification Potential*) per 1 kg produk chocomix sebesar 0,04 kg SO₂ eq, nilai FEP (*Freshwater Eutrophication Potential*) per 1 kg chocomix sebanyak 0,001 kg P eq, dan nilai MEP (*Marine Eutrophication Potential*) untuk 1 kg chocomix yaitu 0,01 kg N eq.

Kata Kunci: minuman cokelat instan, *life cycle assessment*, OpenLCA.

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LIFE CYCLE ASSESSMENT (LCA) OF CHOCOMIX CHOCOLATE DRINK POWDER PRODUCT IN GRIYA COKELAT NGLANGGERAN INDUSTRY, PATUK SUB-DISTRICT, GUNUNG KIDUL DISTRICT

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ABSTRACT

Besides having positive benefits, industry also has potential negative impacts on the environment. Nowadays, the global community's concern for environmental sustainability is increasing, including for environmentally friendly products among the public along with the promotion of Sustainable Development Goals (SDGs) which integrate three aspects of development, namely economic growth, social welfare, and environmental sustainability aimed at global human welfare. This encourages the industry to analyze the environmental impact of the products produced in order to remain competitive in the global market.

The research method used is the Life Cycle Assessment (LCA) method or life cycle assessment of chocomix products with the scope of cradle to gate, namely starting from the cultivation process, extraction of raw materials, to the end of the production process into chocomix products by performing several stages, namely goal and scope, live cycle inventory (LCI), live cycle impact assessment (LCIA) using ReCiPe 2016 midpoint (H), and interpretation.

The results of this study indicate that the GWP (Global Warming Potential) value per 1 kg of chocomix product is 153.8 kg CO₂ eq, the AP (Acidification Potential) value per 1 kg of chocomix product is 0.04 kg SO₂ eq, the FEP (Freshwater Eutrophication Potential) value per 1 kg of chocomix is 0.001 kg P eq, and the MEP (Marine Eutrophication Potential) value for 1 kg of chocomix is 0.01 kg N eq.

Key Words: instant chocolate drink, *life cycle assessment*, OpenLCA.

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